

## PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number

Q94143

Application Number  
10/574,687

Filed  
April 5, 2006

Confirmation Number: 3712  
First Named Inventor  
Ikuo MORITA

Art Unit  
1651

Examiner  
Taeyoon KIM

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

- ☒ The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

### CORRESPONDENCE ADDRESS

Direct all correspondence to the address for SUGHRUE MION, PLLC filed under the Customer Number listed below:

WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

I am the


- ☐ applicant/inventor.

assignee of record of the entire interest. See 37 CFR 3.71.

- ☐ Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

- ☒ attorney or agent of record.  
Registration number 63,763

- ☐ attorney or agent acting under 37 CFR 1.34.  
Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

  
Signature

Jerrick J. Ho

Typed or printed name

(202) 293-7060

Telephone number

May 25, 2011

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

- ☒ \*Total of 1 form is submitted.

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Docket No: Q94143

Ikuo MORITA, et al.

Appln. No.: 10/574,687

Group Art Unit: 1651

Confirmation No.: 3712

Examiner: Taeyoon KIM

Filed: April 5, 2006

For: METHOD OF CONSTRUCTING ARTIFICIAL CELL TISSUE AND BASE MATERIAL  
THEREOF

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

**MAIL STOP AF - PATENTS**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

Further to the Examiner's Final Office Action dated November 26, 2010, Applicants file this Pre-Appeal Brief Request for Review, which is accompanied by the filing of a Notice of Appeal.

The issue for review is whether the rejection of Claims 1, 3-7, 9, and 18 as allegedly being unpatentable over US 5,324,591 (Georger) in view of US 6,294,313 (Kobayashi) and US 5,776,748 (Singhvi) is improper (*see* 11/26/10 Office Action at page 2).

Appellants respectfully submit that the present claims are patentable over the alleged combination of Georger, Kobayashi, and Singhvi.

The Examiner asserts that Georger teaches the claimed step of causing cells to adhere to the claimed cell array substrate.

The rejection should be withdrawn for the following reasons:

(1) As recognized by the Examiner, Georger does not teach or suggest the step of transferring adhered cells to a cell culture substrate in a patterned state.

Although the reasons for rejection include a contention that Georger *inherently* transfers cells grown on UTF, the Examiner acknowledges that Georger does not teach or suggest such feature and rather relies on the disclosure of Singhvi to remedy such deficiency (*see* 05/20/10 Office Action at page 6).

Kobayashi does not cure the deficiencies of Georger in this regard, and for the reasons that follow, Singhvi also does not cure the deficiencies of Georger.

(2) Appellants maintain that Singhvi does not teach or suggest transferring cells *in the patterned state* as recited in claim 1.

Although the Examiner cites columns 17 and 18 of Singhvi for the proposition that the cells having “specified coordinates” are in a patterned state (*see* 04/08/11 Advisory Action and 11/26/10 Office Action at page 3), the technical disclosure of Singhvi is directed to cells in an individual state rather than cells in a patterned state. For example, the method of Singhvi details identifying individual cells (col. 17, lines 8-11), binding individual cells (col. 17, line 16), and retrieving individual cells (col. 17, line 42). Singhvi specifically teaches that “the present invention provides for...isolating and manipulating particular individual cells which are present on a plate containing a great multiplicity of cells separated one from another by only a few microns” (col. 17, lines 45-47). That is, Singhvi teaches the transfer of one or more cells from a library to a secondary plate.

Rather, claim 1 recites “cells adhered to the first region in a patterned state... [and a step of] transferring the adhered cells to a cell culture substrate in the patterned state.” The cells of

Singhvi are not simply *per se* in the patterned state recited in claim 1 for having “specified coordinates” as the Examiner contends.

Appellants further submit that the cited “secondary plates...which would retrieve more than one cell by constructing a secondary plate with biophilic SAM islands corresponding spatially to more than one island on the primary plate” (Singhvi, col. 18, lines 8-12, cited in the 11/26/10 Office Action at page 3) do not meet the patterned state as claimed. Rather, the cited embodiment of Singhvi is directed to the transfer of a plurality of individual cells (each of technically differing character) onto a secondary plate in a manner that a skilled artisan would not consider to be “a patterned state,” and more particularly, would not consider to be the patterned state as claimed.

Further still, regarding the cells having “specified coordinates” so as to allegedly be in the claimed patterned state, a skilled artisan would not consider that Singhvi teaches or suggests a patterned state that would be suitable for culturing together as recited in claim 1.

(3) Regarding the alleged reasons for combining Georger and Singhvi, Appellants dispute the reasons for modification cited by the Examiner.

First, a skilled artisan reading Singhvi would not have applied the subject transfer step to the teaching of Georger.

Singhvi is directed to a device for adhering cells in a specific and predetermined position (Abstract). The embodiment relied upon by the Examiner requires a specific special orientation of the primary plate, *e.g.*, a 10 x 10 array of 100 islands, for retrieving individual cells. The transfer of cells from the primary plate to the secondary plate in Singhvi is for the purpose of selecting individual cells positioned on islands of specified coordinates (see, col. 17, ln. 48-49

and 53-57; col. 18, ln. 23-29). Accordingly, the transfer step disclosed in Singhvi is rendered useless where desired cells are not identifiably segregated on the islands of the primary plate, and a skilled artisan would not have applied the transfer step of Singhvi to the patterned substrate (see, *e.g.*, Fig. 3A) of Georger.

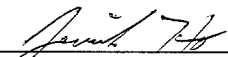
Second, a skilled artisan would readily appreciate the fundamental difference between outgrowth in a cell culture and segregation of individual cells.

The transfer step disclosed in Singhvi is expressly applied to cells identifiably segregated on the islands of the primary plate (see, col. 17, ln. 48-49 and 53-57; col. 18, ln. 23-29). In contrast, Georger does not segregate individual cells on the patterned substrate (see, *e.g.*, Fig. 3A) and, instead, Georger is directed to the outgrowth of cells in a cell culture.

Accordingly, a skilled artisan would not have applied a transfer step of Singhvi to a patterned substrate of Georger as alleged by the Examiner.

Because neither Georger nor Singhvi teach or suggest all the features of claim 1 and because a skilled artisan reading the cited references would not have modified them as alleged by the Examiner, reconsideration and withdrawal of the rejection are respectfully requested.

Respectfully submitted,

  
Jerrick J. Ho  
Registration No. 63,763

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: May 25, 2011